FCC Information and Copyright

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation.

Dichiarazione di conformità sintetica

Ai sensi dell'art. 2 comma 3 del D.M. 275 del 30/10/2002

Si dichiara che questo prodotto è conforme alle normative vigenti e soddisfa i requisiti essenziali richiesti dalle direttive

2004/108/CE, 2006/95/CE e 1999/05/CE

quando ad esso applicabili

Short Declaration of conformity

We declare this product is complying with the laws in force and meeting all the essential requirements as specified by the directives

2004/108/CE, 2006/95/CE and 1999/05/CE

whenever these laws may be applied

Table of Contents

CHAPTER 1: INTRODUCTION

1.1 BEFORE YOU START

Thank you for choosing our product. Before you start installing the motherboard, please make sure you follow the instructions below:

- Prepare a dry and stable working environment with sufficient lighting.
- Always disconnect the computer from power outlet before operation.
- Before you take the motherboard out from anti-static bag, ground yourself properly by touching any safely grounded appliance, or use grounded wrist strap to remove the static charge.
- Avoid touching the components on motherboard or the rear side of the board unless necessary. Hold the board on the edge, do not try to bend or flex the board.
- Do not leave any unfastened small parts inside the case after installation. Loose parts will cause short circuits which may damage the equipment.
- Keep the computer from dangerous area, such as heat source, humid air and water.
- The operating temperatures of the computer should be 0 to 45 degrees Celsius.

1.2 PACKAGE CHECKLIST

- Serial ATA Cable x2
- Rear I/O Panel for ATX Case x1
- Installation Guide x1
- Fully Setup Driver DVD x1

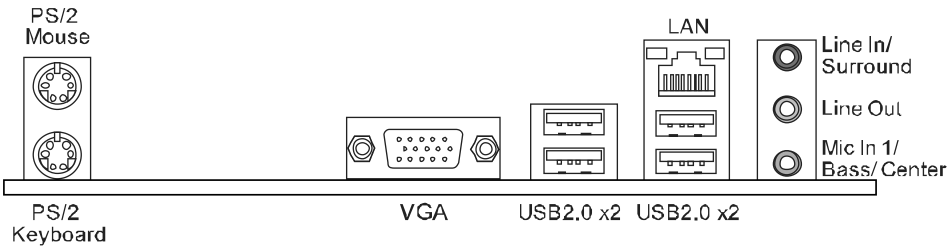
Note: The package contents may be different due to area or your motherboard version.

1.3 MOTHERBOARD FEATURES

SPEC		
CPU	Socket FM1 AMD A-Series / E2-Series / Athlon II / Sempron processors	AMD 64 Architecture enables 32 and 64 bit computing (Maximum Watt: 100W)
Chipset	AMD A55	
Super I/O	ITE 8772E Provides the most commonly used legacy Super I/O functionality Low Pin Count Interface	Environment Control initiatives H/W Monitor Fan Speed Controller ITE's "Smart Guardian" function
Main Memory	DDR3 DIMM Slots x 2 Max Memory Capacity 16GB Each DIMM supports 512MB/ 1GB/2GB/4GB/8GB DDR3	Dual Channel Mode DDR3 memory module Supports DDR3 800/1066/1333/1600/1866 Registered DIMM and ECC DIMM is not supported
SATA II	Integrated Serial ATA Controller	Data transfer rates up to 3 Gb/s. SATA Version 2.0 specification compliant. RAID 0,1,10 support
LAN	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	10 / 100 Mb/s auto negotiation 10 / 100 / 1000 Mb/s auto negotiation
Sound	ALC662	5.1channels audio out Supports HD Audio
Slots	PCI Express Gen2 x16 Slot x1 PCI Express x1 Slot x1	Supports PCI-E Gen2 x16 expansion card Supports PCI-E Gen2 x1 expansion card
On Board Connectors	SATA Connector x4 Front Panel Connector x1 Front Audio Connector x1 CPU Fan Header x1 System Fan Header x1 CMOS clear Header x1 USB2.0 Connector x2	Each connector supports 1 SATA device Supports front panel facilities Supports front panel audio function CPU Fan power supply (with Smart Fan function) System Fan Power supply Restore CMOS data to factory default Each connector supports 2 front panel USB2.0 ports

SPEC			
	Serial Port Connector	x1	Connects to RS-232 Port
	Power Connector (24-Pin)	x1	Connects to Power supply
	Power Connector (4-Pin)	x1	Connects to Power supply
Rear Panel I/O	PS/2 Keyboard / Mouse	x1	Connects to PS/2 Keyboard / Mouse
	VGA Port	x1	Connect to D-SUB monitor
	LAN port	x1	Connect to RJ-45 ethernet cable
	USB2.0 Port	x4	Connect to USB2.0 devices
	Audio Jack	x3	Provide Audio-In/Out and Mic. connection
Board Size	175 mm (W) x 226 mm (L)		uATX
OS Support	Windows XP / Vista / 7		Biostar reserves the right to add or remove support for any OS With or without notice.

1.4 Rear Panel Connectors

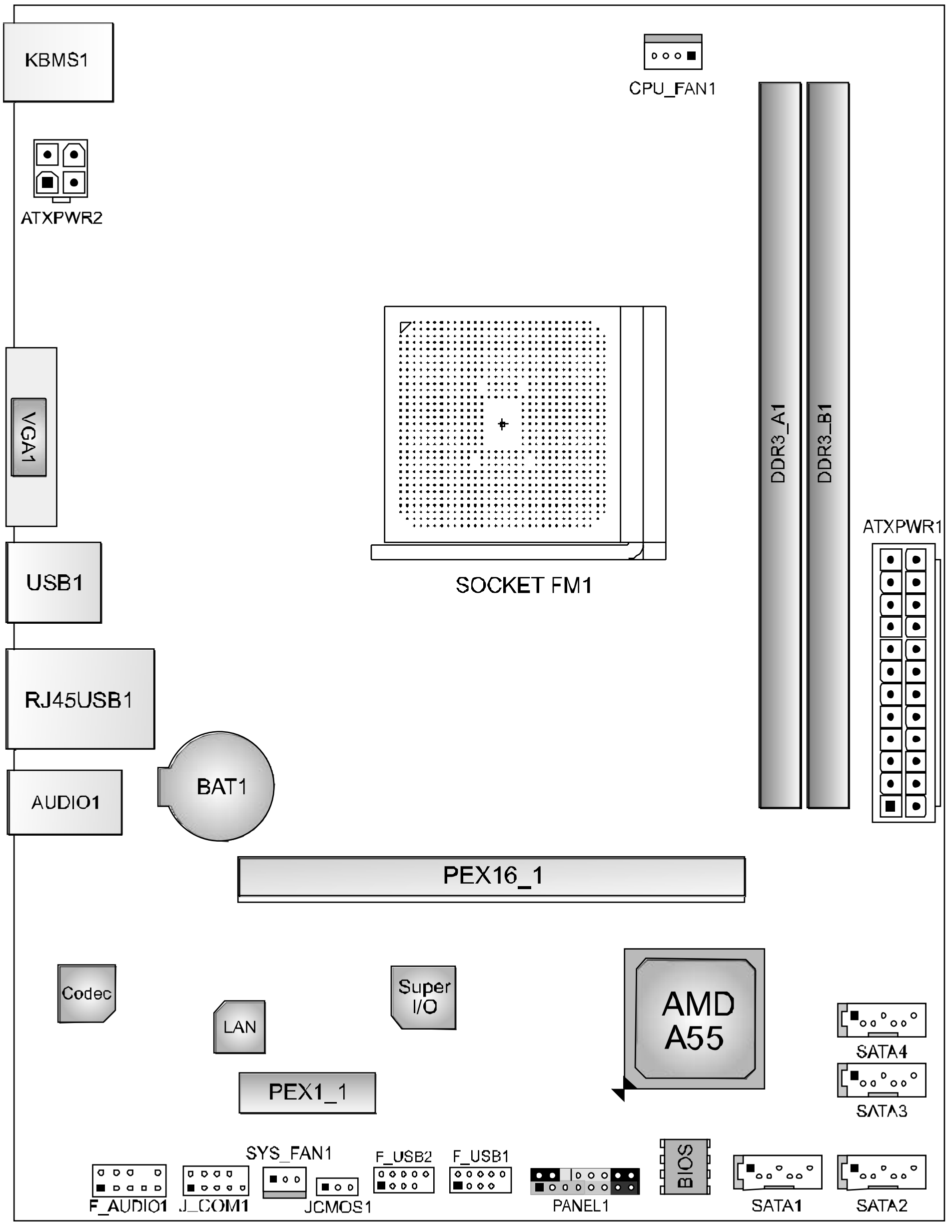


NOTE: VGA Output require an AMD family processor with intedrated graphics.

NOTE: Since the audio chip supports High Definition Audio Specification, the function of each audio jack can be defined by software. The input / output function of each audio jack listed above represents the default setting. However, when connecting external microphone to the audio port, please use the Line In (Blue) and Mic In (Pink) audio jack.

NOTE: **Maximum resolution:**
VGA: 1920 x 1600 @75Hz

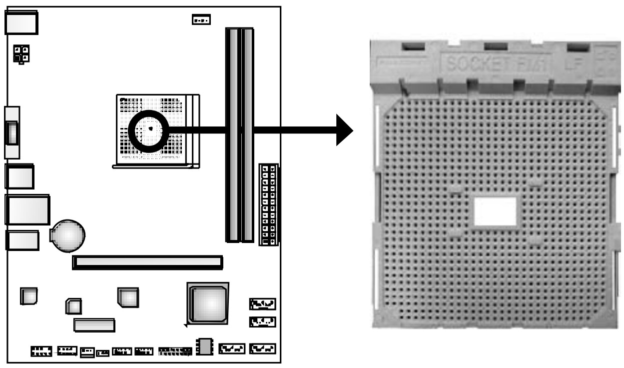
1.5 MOTHERBOARD LAYOUT



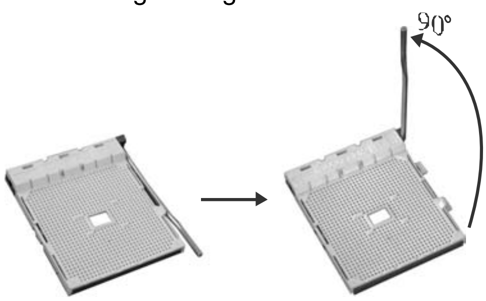
Note: ■ represents the 1st pin.

CHAPTER 2: HARDWARE INSTALLATION

2.1 INSTALLING CENTRAL PROCESSING UNIT (CPU)



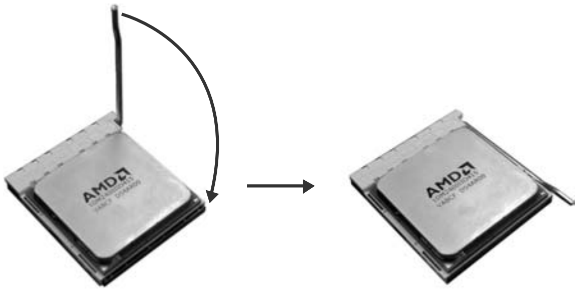
Step 1: Pull the socket locking out from the socket and then raise the lever up to a 90-degree angel.



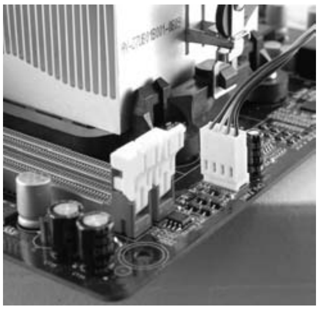
Step 2: Look for the white triangle on socket, and the gold triangle on CPU should point towards this white triangle. The CPU will fit only in the correct orientation.



Step 3: Hold the CPU down firmly, and then close the lever to locked the position



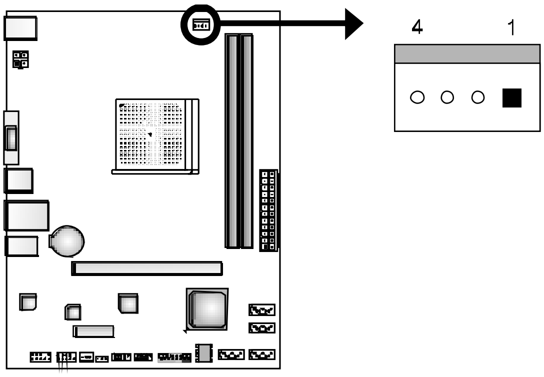
Step 4: Put the CPU Fan on the CPU and buckle it. Connect the CPU FAN power cable to the CPU_FAN1. This completes the installation.



2.2 FAN HEADERS

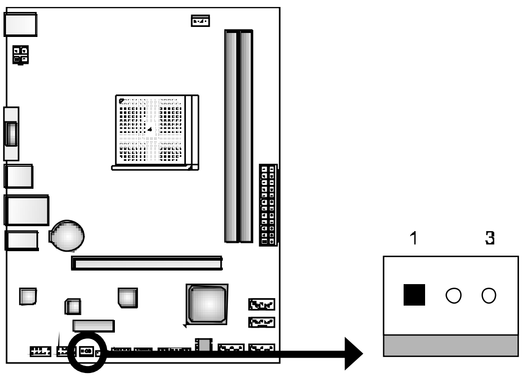
These fan headers support cooling-fans built in the computer. The fan cable and connector may be different according to the fan manufacturer. Connect the fan cable to the connector while matching the black wire to pin#1.

CPU_FAN1: CPU Fan Header



Pin	Assignment
1	Ground
2	+12V
3	FAN RPM rate sense
4	Smart Fan Control (By Fan)

SYS_FAN1: System Fan Header



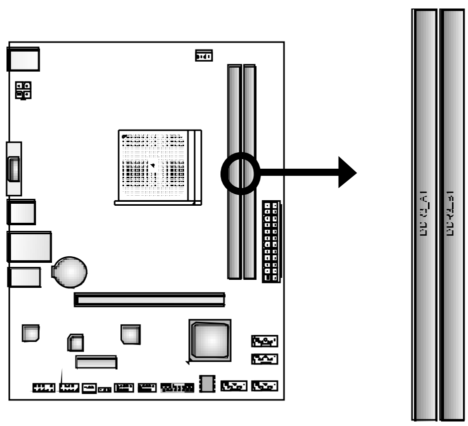
Pin	Assignment
1	Ground
2	+12V
3	FAN RPM rate sense

Note:

CPU_FAN1, SYS_FAN1 support 4-pin and 3-pin head connectors. When connecting with wires onto connectors, please note that the red wire is the positive and should be connected to pin#2, and the black wire is Ground and should be connected to GND.

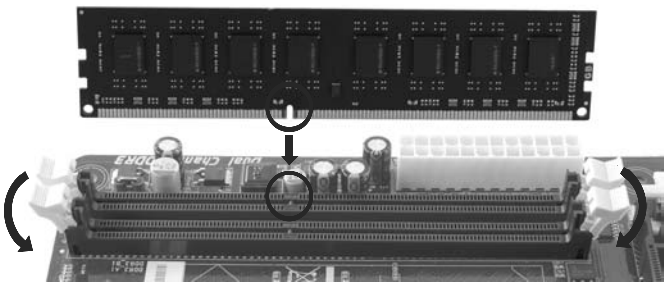
2.3 Installing System Memory

A. DDR3 Modules



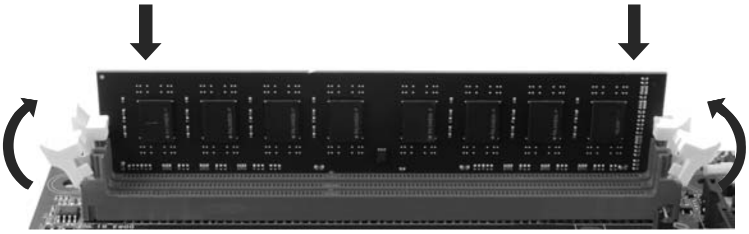
Step1:

Unlock a DIMM slot by pressing the retaining clips outward. Align a DIMM on the slot such that the notch on the DIMM matches the break on the Slot.



Step2:

Insert the DIMM vertically and firmly into the slot until the retaining chip snap back in place and the DIMM is properly seated.



Note:

If the DIMM does not go in smoothly, do not force it. Pull it all the way out and try again.

B. Memory Capacity

DIMM Socket Location	DDR3 Module	Total Memory Size
DDR3_A1	512MB/1GB/2GB/4GB/8GB	Max is 16GB.
DDR3_B1	512MB/1GB/2GB/4GB/8GB	

C. Dual Channel Memory Installation

Please refer to the following requirements to activate Dual Channel function:
Install memory module of the same density in pairs, shown in the table.

Dual Channel Status	DDR3_A1	DDR3_B1
Disabled	O	X
Disabled	X	O
Enabled	O	O

(O means memory installed, X means memory not installed.)

Note:

The DRAM bus width of the memory module must be the same (x8 or x16)

D. DDR Speed Support

Please refer to the following table for DDR speed reference:

# of DIMM per Channel	# of Ranks per DIMM	Max DDR Speed Grade for 1.50V DIMM
1 of 1 UDIMM	xR	DDR3-1866
1 of 2 UDIMMs	xR	DDR3-1600 / DDR3-1333

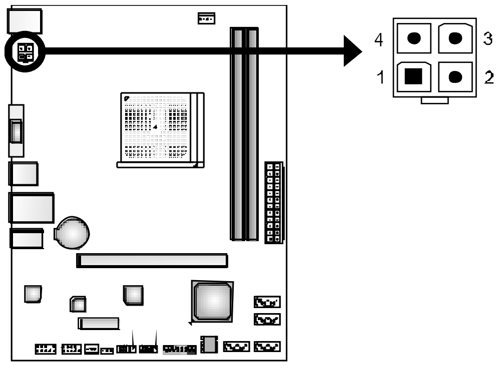
Note:

xR: Single or double side memory moudule

2.4 Connectors and Slots

ATXPWR2: ATX Power Source Connector

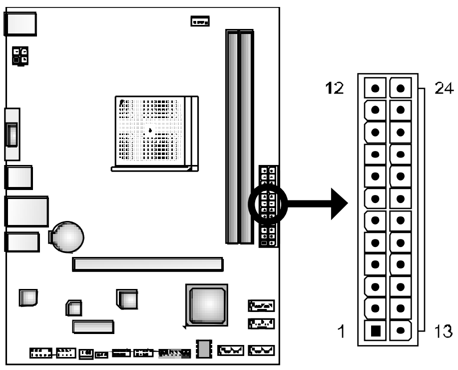
This connector will provide +12V to CPU power circuit.



Pin	Assignment
1	+12V
2	+12V
3	Ground
4	Ground

ATXPWR1: ATX Power Source Connector

This connector allows user to connect 24-pin power connector on the ATX power supply.



Pin	Assignment	Pin	Assignment
13	+3.3V	1	+3.3V
14	-12V	2	+3.3V
15	Ground	3	Ground
16	PS_ON	4	+5V
17	Ground	5	Ground
18	Ground	6	+5V
19	Ground	7	Ground
20	NC	8	PW_OK
21	+5V	9	Standby Voltage+5V
22	+5V	10	+12V
23	+5V	11	+12V
24	Ground	12	+3.3V

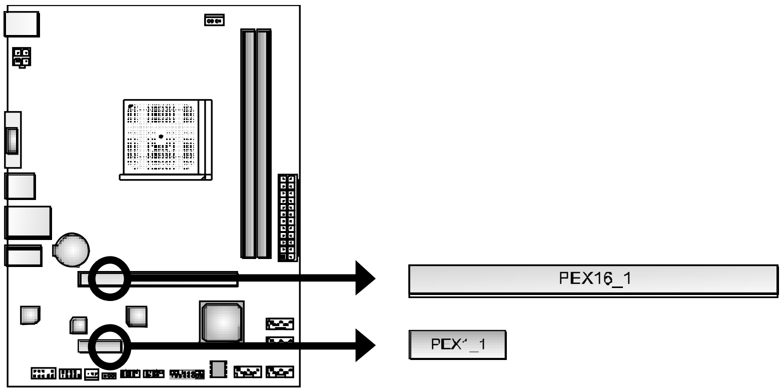
Note: Before you power on the system, please make sure that both ATXPWR1 and ATXPWR2 connectors have been plugged-in.

PEX16_1: PCI-Express Gen2 x16 Slot

- PCI-Express 2.0 compliant.
- Maximum theoretical realized bandwidth of 8GB/s simultaneously per direction, for an aggregate of 16GB/s totally.
- PCI-Express Gen2 supports a raw bit-rate of 5.0Gb/s on the data pins.

PEX1_1: PCI-Express x1 Slot

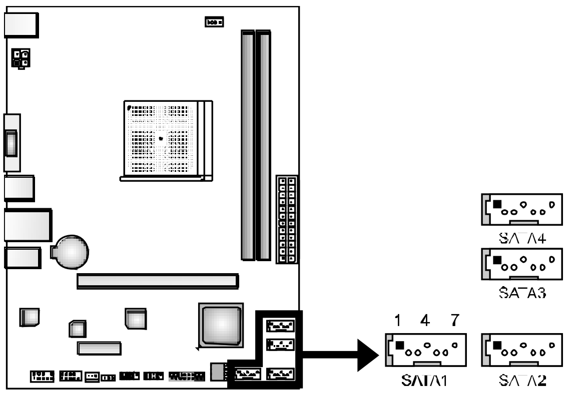
- PCI-Express 2.0 compliant.
- Data transfer bandwidth up to 500MB/s per direction; 1GB/s in total.



SATA1~SATA4: Serial ATA Connectors

These connectors connect to SATA hard disk drives via SATA cables.

Those satisfy the SATA 2.0 spec and with transfer rate of 3.0Gb/s.



Pin	Assignment
1	Ground
2	TX+
3	TX-
4	Ground
5	RX-
6	RX+
7	Ground

CHAPTER 3: HEADERS & JUMPERS SETUP

3.1 HOW TO SETUP JUMPERS

The illustration shows how to set up jumpers. When the jumper cap is placed on pins, the jumper is “close”, if not, that means the jumper is “open”.



Pin opened



Pin closed

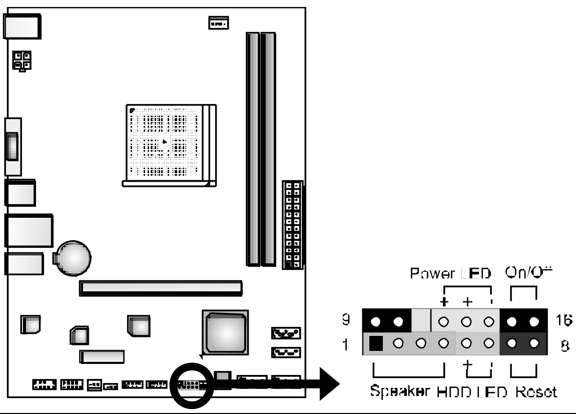


Pin1-2 closed

3.2 DETAIL SETTINGS

PANEL1: Front Panel Header

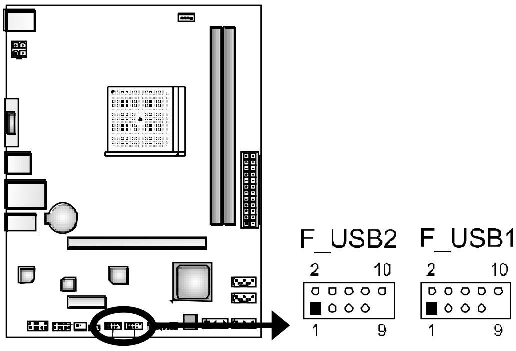
This 16-pin connector includes Power-on, Reset, HDD LED, Power LED, and speaker connection. It allows user to connect the PC case’s front panel switch functions.



Pin	Assignment	Function	Pin	Assignment	Function
1	+5V	Speaker Connector	9	N/A	N/A
2	N/A		10	N/A	
3	N/A		11	N/A	N/A
4	Speaker		12	Power LED (+)	Power LED
5	HDD LED (+)	Hard drive LED	13	Power LED (+)	
6	HDD LED (-)		14	Power LED (-)	
7	Ground	Reset button	15	Power button	Power-on button
8	Reset control		16	Ground	

F_USB1/F_USB2: Headers for USB 2.0 Ports at Front Panel

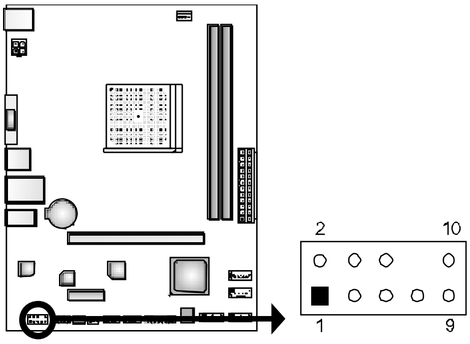
This header allows user to connect additional USB cable on the PC front panel, and also can be connected with internal USB devices, like USB card reader.



Pin	Assignment
1	+5V (fused)
2	+5V (fused)
3	USB-
4	USB-
5	USB+
6	USB+
7	Ground
8	Ground
9	NC
10	Key

F_AUDIO1: Front Panel Audio Header

This header allows user to connect the front audio output cable with the PC front panel. This header supports HD and AC'97 audio front panel connector.



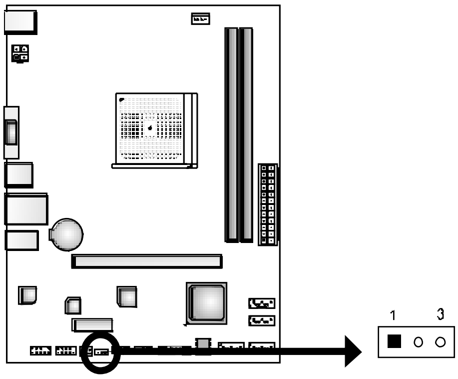
HD Audio		AC'97	
Pin	**Assignment**	**Pin**	**Assignment**
1	Mic Left in	1	Mic In
2	Ground	2	Ground
3	Mic Right in	3	Mic Power
4	GPIO	4	Audio Power
5	Right line in	5	RT Line Out
6	Jack Sense	6	RT Line Out
7	Front Sense	7	Reserved
8	Key	8	Key
9	Left line in	9	LFT Line Out
10	Jack Sense	10	LFT Line Out

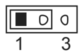
Note1: It is recommended that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high definition audio capability.

Note2: Please try to disable the "Front Panel Jack Detection" if you want to use an AC'97 front audio output cable. The function can be found via O.S. Audio Utility.

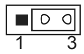
JCMOS1: Clear CMOS Header

Placing the jumper on pin2-3, it allows user to restore the BIOS safe setting and the CMOS data. Please carefully follow the procedures to avoid damaging the motherboard.





Pin 1-2 Close:
Normal Operation (default).



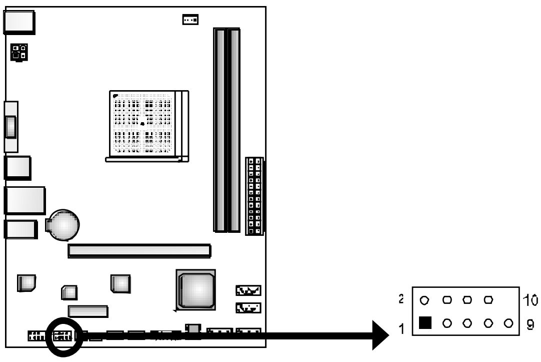
Pin 2-3 Close:
Clear CMOS data.

※ Clear CMOS Procedures:

1. Remove AC power line.
2. Set the jumper to “Pin 2-3 close”.
3. Wait for five seconds.
4. Set the jumper to “Pin 1-2 close”.
5. Power on the AC.
6. Load Optimal Defaults and save settings in CMOS.

J_COM1: Serial Port Connector

The motherboard has a Serial Port Connector for connecting RS-232 Port.



Pin	Assignment
1	Carrier detect
2	Received data
3	Transmitted data
4	Data terminal
5	Signal ground
6	Data set ready
7	Request to send
8	Clear to send
9	Ring indicator
10	NC

CHAPTER 4: AMD DUAL GRAPHICS TECHNOLOGY

4.1 AMD Dual Graphics Technology Introduction

When user adds a PCIE display adapter, it can be integrated with IGD to show better performance. To make the two video devices work simultaneously and normally, please refer to the following setting.

4.2 AMD Dual Graphics Requirement

- **Operating System:** Windows Vista / Windows 7
- **Supported DUAL Graphics Combinations:**

APU / GFX	A4-Series HD 6410D	A6-Series HD 6530D	A8-Series HD 6550D
HD 6670	Attach Only (No DG)	Y	Y
HD 6570	Attach Only (No DG)	Y	Y
HD 6450	Y	Y	Y
HD 6350	Y	Attach Only (No DG)	Attach Only (No DG)

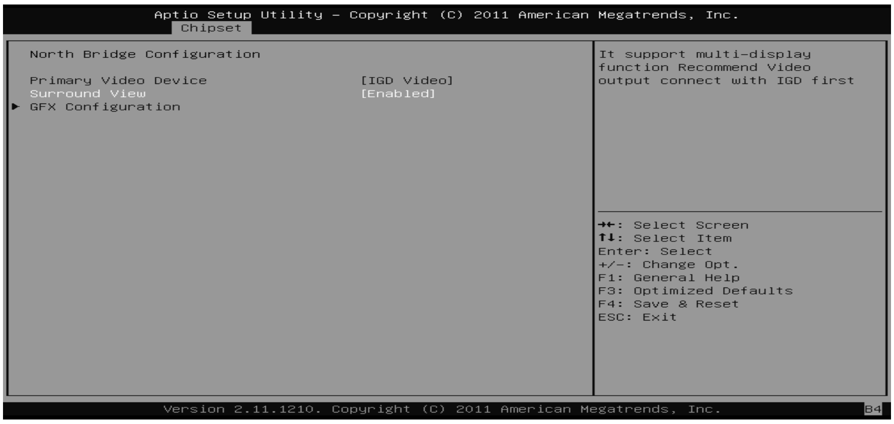
Note:

- "*Attach Only (No DG)*" indicates supported discrete graphics attachment without Dual Graphics.
- E-Series CPU does not support Dual Graphics.
- Single Channel or unbalanced memory does not support Dual Graphic function. Please use at least DDR3-1333 4G (2G+2G).
- The information described above in this manual is for your reference only and the actual information and settings on board may be different from this manual. For further AMD Dual Graphics information, please visit the following website: http://www.amd.com

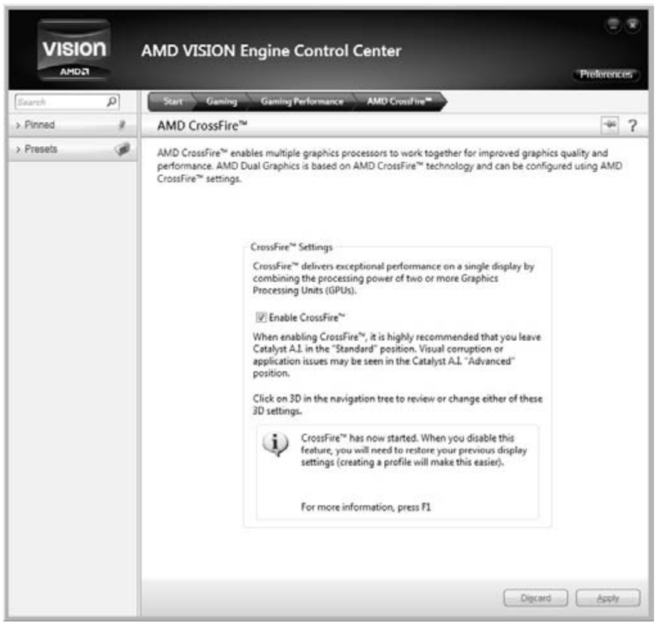
4.3 AMD Dual Graphics Setup

Step 1: Insert Dual Graphics-Ready graphics card into PEX16_1 slot.

Step 2: Set the BIOS setting as follows:
[Chipset]→[North Bridge]→[Surround View]→[Enabled]



Step 3: Install Driver DVD Chipset Driver, and reboot the system. Activate AMD VISION Engine Control Center to make sure CrossFire has been enabled.



CHAPTER 5: RAID FUNCTIONS

5.1 OPERATING SYSTEM

Supports Windows Vista and Windows 7.

5.2 RAID ARRAYS

RAID supports the following types of RAID arrays:

RAID 0: RAID 0 defines a disk striping scheme that improves disk read and write times for many applications.

RAID 1: RAID 1 defines techniques for mirroring data.

RAID 10: RAID 10 combines the techniques used in RAID 0 and RAID 1.

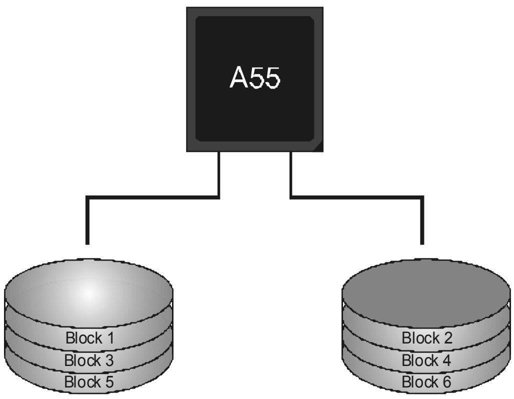
5.3 HOW RAID WORKS

RAID 0:

The controller "stripes" data across multiple drives in a RAID 0 array system. It breaks up a large file into smaller blocks and performs disk reads and writes across multiple drives in parallel. The size of each block is determined by the stripe size parameter, which you set during the creation of the RAID set based on the system environment. This technique reduces overall disk access time and offers high bandwidth.

Features and Benefits

- ***Drives:*** Minimum 2, and maximum is up to 6 or 8. Depending on the platform.
- ***Uses:*** Intended for non-critical data requiring high data throughput, or any environment that does not require fault tolerance.
- ***Benefits:*** provides increased data throughput, especially for large files. No capacity loss penalty for parity.
- ***Drawbacks:*** Does not deliver any fault tolerance. If any drive in the array fails, all data is lost.
- ***Fault Tolerance:*** No.
- ***Total Capacity:*** (Minimal. HDD Capacity) x (Connected HDDs Amount)



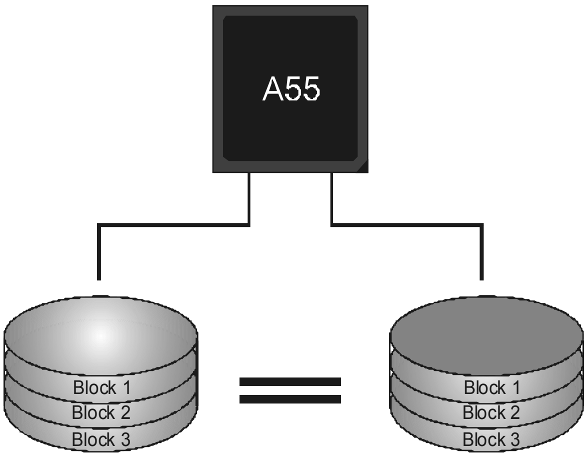
RAID 1:

Every read and write is actually carried out in parallel across 2 disk drives in a RAID 1 array system. The mirrored (backup) copy of the data can reside on the same disk or on a second redundant drive in the array. RAID 1 provides a hot-standby copy of data if the active volume or drive is corrupted or becomes unavailable because of a hardware failure.

RAID techniques can be applied for high-availability solutions, or as a form of automatic backup that eliminates tedious manual backups to more expensive and less reliable media.

Features and Benefits

- ***Drives:*** Minimum 2, and maximum is 2.
- ***Uses:*** RAID 1 is ideal for small databases or any other application that requires fault tolerance and minimal capacity.
- ***Benefits:*** Provides 100% data redundancy. Should one drive fail, the controller switches to the other drive.
- ***Drawbacks:*** Requires 2 drives for the storage space of one drive. Performance is impaired during drive rebuilds.
- ***Fault Tolerance:*** Yes.

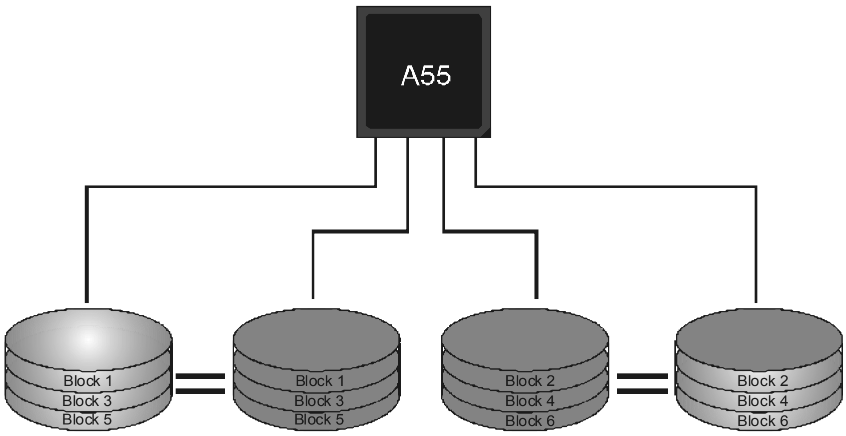


RAID 10:

RAID 1 drives can be stripped using RAID 0 techniques. Resulting in a RAID 10 solution for improved resiliency, performance and rebuild performance.

Features and Benefits

- ***Drives:*** Minimum 4, and maximum is 6 or 8, depending on the platform.
- ***Benefits:*** Optimizes for both fault tolerance and performance, allowing for automatic redundancy. May be simultaneously used with other RAID levels in an array, and allows for spare disks.
- ***Drawbacks:*** Requires twice the available disk space for data redundancy, the same as RAID level 1.
- ***Fault Tolerance:*** Yes.



CHAPTER 6: USEFUL HELP

6.1 DRIVER INSTALLATION NOTE

After you installed your operating system, please insert the Fully Setup Driver DVD into your optical drive and install the driver for better system performance.

You will see the following window after you insert the DVD



The setup guide will auto detect your motherboard and operating system.

> ***Note:***
> If this window didn't show up after you insert the Driver DVD, please use file browser to locate and execute the file ***SETUP.EXE*** under your optical drive.

A. Driver Installation

To install the driver, please click on the Driver icon. The setup guide will list the compatible driver for your motherboard and operating system. Click on each device driver to launch the installation program.

B. Software Installation

To install the software, please click on the Software icon. The setup guide will list the software available for your system, click on each software title to launch the installation program.

C. Manual

Aside from the paperback manual, we also provide manual in the Driver DVD. Click on the Manual icon to browse for available manual.

> ***Note:***
> You will need Acrobat Reader to open the manual file. Please download the latest version of Acrobat Reader software from
> ***http://www.adobe.com/products/acrobat/readstep2.html***

6.2 SOFTWARE

Installing Software

1. Insert the Setup DVD to the optical drive. The drivers installation program would appear if the Autorun function has been enabled.
2. Select **Software Installation**, and then click on the respective software title.
3. Follow the on-screen instructions to complete the installation.

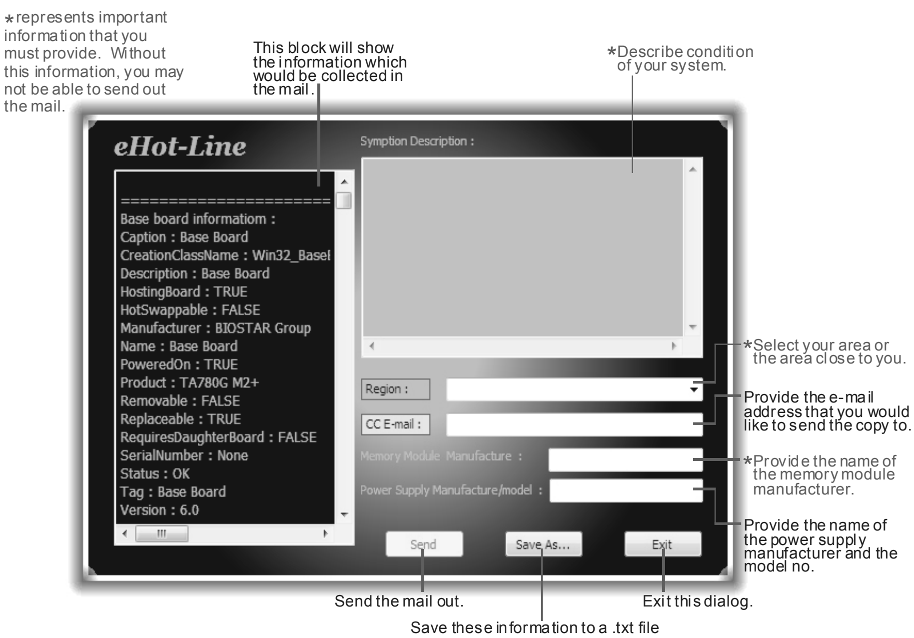
Launching Software

After the installation process, you will see the software icon "eHOT Line" / "BIOS Update" appears on the desktop. Double-click the icon to launch the utility.

eHot-Line (Optional)

eHot-Line is a convenient utility that helps you to contact with our Tech-Support system. This utility will collect the system information which is useful for analyzing the problem you may have encountered, and then send these information to our tech-support department to help you fix the problem.

⚠ Before you use this utility, please set Outlook Express as your default e-mail client application program.

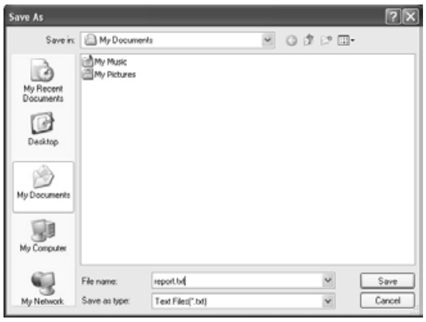




After filling up this information, click “**Send**” to send the mail out. A warning dialog would appear asking for your confirmation; click “**Send**” to confirm or “**Do Not Send**” to cancel.

If you want to save this information to a .txt file, click “**Save As…**” and then you will see a saving dialog appears asking you to enter file name.

Enter the file name and then click “**Save**”. Your system information will be saved to a .txt file.





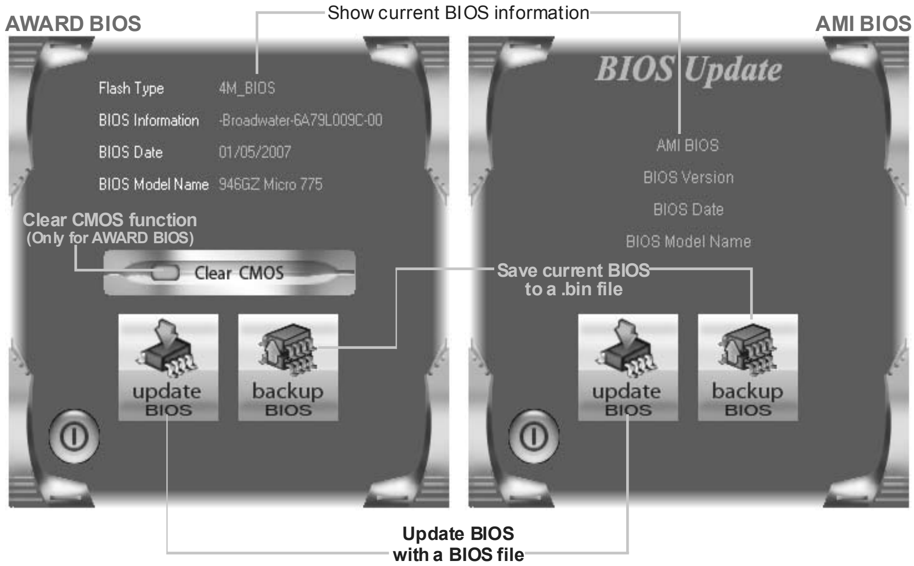
Open the saved .txt file, you will see your system information including motherboard/BIOS/CPU/video/ device/OS information. This information is also concluded in the sent mail.

We will not share customer’s data with any other third parties, so please feel free to provide your system information while using eHot-Line service.

If you are not using Outlook Express as your default e-mail client application, you may need to save the system information to a .txt file and send the file to our tech support with other e-mail application. Go to the following web http://www.biostar.com.tw/app/en-us/about/contact.php for getting our contact information.

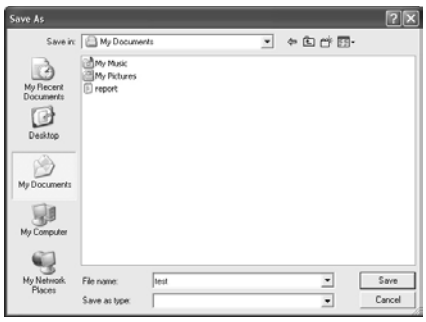
BIOS Update

BIOS Update is a convenient utility which allows you to update your motherboard BIOS under Windows system.



<Backup BIOS>

Once click on this button, the saving dialog will show. Choose the position to save file and enter file name. (We recommend that the file name should be English/number and no longer than 7 characters.) Then click **Save**.

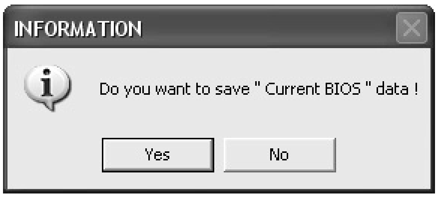


<Update BIOS>

Before doing this, please download the proper BIOS file from the website.

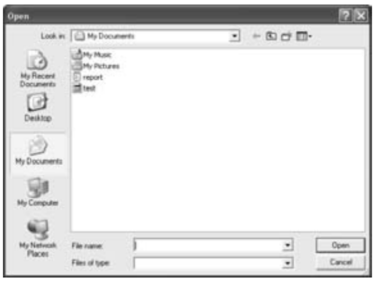
For AWARD BIOS, update BIOS procedure should be run with Clear CMOS function, so please check on Clear CMOS first.

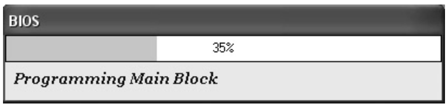




Then click Update BIOS button, a dialog will show for asking you backup current BIOS. Click **Yes** for BIOS backup and refer to the Backup BIOS procedure; or click **No** to skip this procedure.

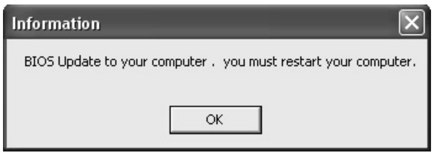
After the BIOS Backup procedure, the open dialog will show for requesting the BIOS file which is going to be updated. Please choose the proper BIOS file for updating, then click on **Open**.





The utility will update BIOS with the proper BIOS file, and this process may take minutes. Please do not open any other applications during this process.

After the BIOS Update process, click on **OK** to restart the system.



While the system boots up and the full screen logo shows, press  <Delete> key to enter BIOS setup.

In the BIOS setup, use the **Load Optimized Defaults** function and then **Save and Exit Setup** to exit BIOS setup. BIOS Update is completed.



All the information and content above about the software are subject to be changed without notice. For better performance, the software is being continuously updated. The information and pictures described above are for your reference only. The actual information and settings on board may be slightly different from this manual.

6.3 EXTRA INFORMATION

CPU Overheated

If the system shutdown automatically after power on system for seconds, that means the CPU protection function has been activated.

When the CPU is over heated, the motherboard will shutdown automatically to avoid a damage of the CPU, and the system may not power on again.

In this case, please double check:

1. The CPU cooler surface is placed evenly with the CPU surface.
2. CPU fan is rotated normally.
3. CPU fan speed is fulfilling with the CPU speed.

After confirmed, please follow steps below to relief the CPU protection function.

1. Remove the power cord from power supply for seconds.
2. Wait for seconds.
3. Plug in the power cord and boot up the system.

Or you can:

1. Clear the CMOS data.
   (See "Close CMOS Header: JCMOS1" section)
2. Wait for seconds.
3. Power on the system again.

BIO-Flasher

BIO-Flasher is a BIOS flashing utility providing you an easy and simple way to update your BIOS via USB pen drive or floppy disk.

The BIO-Flasher is built in the BIOS chip. To enter the utility, **press <F12> during the Power-On Self Tests (POST)** procedure while booting up.

Updating BIOS with BIO-Flasher

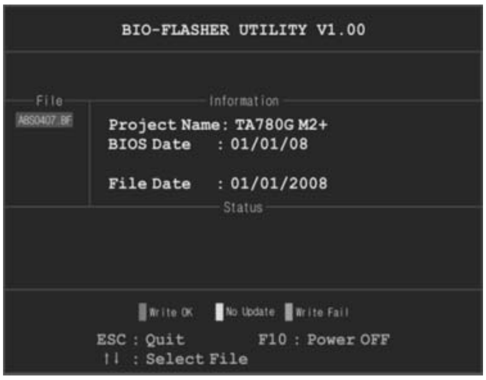
1. Go to the website to download the latest BIOS file for the motherboard.

2. Then, save the BIOS file into a USB pen drive or a floppy disk.

3. Insert the USB pen drive or the floppy disk that contains the BIOS file to the USB port or the floppy disk drive.

4. Power on or reset the computer and then press **<F12>** during the **POST** process. A select dialog as the picture on the right appears. Select the device contains the BIOS file and press **<Enter>** to enter the utility.





5. The utility will show the BIOS files and their respective information. Select the proper BIOS file and press **<Enter>** then **<Y>** to perform the BIOS update process.

6. After the update process, the utility will ask you to reboot the system. Press **<Y>** to proceed. BIOS update completes.



- This utility only allows storage device with FAT32/16 format and single partition.
- Shutting down or resetting the system while updating the BIOS will lead to system boot failure.

6.4 AMI BIOS BEEP CODE

Boot Block Beep Codes

Number of Beeps	Description
1	No media present. (Insert diskette in floppy drive A:)
2	"AMIBOOT.ROM" file not found in root directory of diskette in A:
3	Insert next diskette if multiple diskettes are used for recovery
4	Flash Programming successful
5	File read error
7	No Flash EPROM detected
10	Flash Erase error
11	Flash Program error
12	"AMIBOOT.ROM" file size error
13	BIOS ROM image mismatch (file layout does not match image present in flash device)

POST BIOS Beep Codes

Number of Beeps	Description
1	Memory refresh timer error
3	Base memory read/write test error
6	Keyboard controller BAT command failed
7	General exception error (processor exception interrupt error)
8	Display memory error (system video adapter)

Troubleshooting POST BIOS Beep Codes

Number of Beeps	Troubleshooting Action
1, 3	Reseat the memory, or replace with known good modules.
6, 7	Fatal error indicating a serious problem with the system. Consult your system manufacturer. Before declaring the motherboard beyond all hope, eliminate the possibility of interference by a malfunctioning add-in card. Remove all expansion cards except the video adapter. ● If beep codes are generated when all other expansion cards are absent, consult your system manufacturer's technical support. ● If beep codes are not generated when all other expansion cards are absent, one of the add-in cards is causing the malfunction. Insert the cards back into the system one at a time until the problem happens again. This will reveal the malfunctioning card.
8	If the system video adapter is an add-in card, replace or reseat the video adapter. If the video adapter is an integrated part of the system board, the board may be faulty.

6.5 TROUBLESHOOTING

Probable	Solution
1. There is no power in the system. Power LED does not shine; the fan of the power supply does not work 2. Indicator light on keyboard does not shine.	1. Make sure power cable is securely plugged in. 2. Replace cable. 3. Contact technical support.
System is inoperative. Keyboard lights are on, power indicator lights are lit, and hard drives are running.	Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.
System does not boot from a hard disk drive, but can be booted from optical drive.	1. Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup. 2. Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.
System only boots from an optical drive. Hard disks can be read, applications can be used, but system fails to boot from a hard disk.	1. Back up data and applications files. 2. Reformat the hard drive. Re-install applications and data using backup disks.
Screen message shows "Invalid Configuration" or "CMOS Failure."	Review system's equipment. Make sure correct information is in setup.
System cannot boot after user installs a second hard drive.	1. Set master/slave jumpers correctly. 2. Run SETUP program and select correct drive types. Call the drive manufacturers for compatibility with other drives.

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APPENDIX: SPEC IN OTHER LANGUAGES

GERMAN

Spezifikationen		
CPU	Sockel FM1 AMD A-Series / E2-Series / Athlon II / Sempron Prozessoren	Die AMD 64-Architektur unterstützt eine 32-Bit- und 64-Bit-Datenverarbeitung (Maximales Watt: 100W)
Chipsatz	AMD A55	
Super E/A	ITE 8772E Bietet die häufig verwendeten alten Super E/A-Funktionen. Low Pin Count-Schnittstelle	Umgebungskontrolle, Hardware-Überwachung Lüfterdrehzahl-Controller "Smart Guardian"-Funktion von ITE
Arbeitsspeicher	DDR3 DIMM-Steckplätze x 2 Max. 16GB Arbeitsspeicher Jeder DIMM unterstützt 512MB/ 1GB/2GB/4GB/8GB DDR3.	Dual-Kanal DDR3 Speichermodul Unterstützt DDR3 800/1066/1333/1600/1866 registrierte DIMMs. ECC DIMMs werden nicht unterstützt.
SATA II	Integrierter Serial ATA-Controller	Datentransferrate bis zu 3 Gb/s Konform mit der SATA-Spezifikation Version 2.0 Unterstützt RAID 0,1,10
LAN	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	10 / 100 Mb/s Auto-Negotiation 10 / 100 / 1000 Mb/s Auto-Negotiation
Audio-Codec	ALC662	5.1-Kanal-Audioausgabe Unterstützt High-Definition Audio
Steckplätze	PCI Express Gen2 x16 Steckplatz x1 PCI Express x1 Steckplatz x1	
Onboard-Anschluss	SATA-Anschluss x4 Fronttafelanschluss x1 Front-Audioanschluss x1 CPU-Lüfter-Sockel x1	Jeder Anschluss unterstützt 1 SATA-Laufwerk Unterstützt die Fronttafelfunktionen Unterstützt die Fronttafel-Audioanschlussfunktion CPU-Lüfterstromversorgungsanschluss (mit Smart Fan-Funktion)

Spezifikationen			
	System-Lüfter-Sockel	x1	System-Lüfter-Stromversorgungsanschluss
	"CMOS löschen"-Sockel	x1	
	USB2.0-Anschluss	x2	Jeder Anschluss unterstützt 2 Fronttafel-USB2.0-Anschlüsse
	Serieller Anschluss	x1	
	Stromanschluss (24-polig)	x1	
	Stromanschluss (4-polig)	x1	
Rückseiten-E/A	PS/2-Tastatur / Maus	x1	
	VGA-Anschluss	x1	
	LAN-Anschluss	x1	
	USB2.0-Anschluss	x4	
	Audioanschluss	x3	
Platinengröße	175 mm (B) X 226 mm (L)		
OS-Unterstützung	Windows XP / Vista / 7		Biostar behält sich das Recht vor, ohne Ankündigung die Unterstützung für ein Betriebssystem hinzuzufügen oder zu entfernen.

FRENCH

SPEC		
UC	Socket FM1 Processeurs AMD A-Series / E2-Series / Athlon II / Sempron	L'architecture AMD 64 permet le calcul 32 et 64 bits (Watt maximum : 100W)
Chipset	AMD A55	
Super E/S	ITE 8772E Fournit la fonctionnalité de Super E/S patrimoniales la plus utilisée. Interface à faible compte de broches	Initiatives de contrôle environnementales, Moniteur de matériel Contrôleur de vitesse de ventilateur Fonction "Gardien intelligent" de l'ITE
Mémoire principale	Fentes DDR3 DIMM x 2 Capacité mémoire maximale de 16Go Chaque DIMM prend en charge des DDR3 de 512Mo/1Go/2Go/4Go/8Go	Module de mémoire DDR3 à mode à double voie Prend en charge la DDR3 800/1066/1333/1600/1866 Les DIMM à registres et DIMM avec code correcteurs d'erreurs ne sont pas prises en charge
SATA II	Contrôleur Serial ATA intégré	Taux de transfert jusqu'à 3 Go/s. Conforme à la spécification SATA Version 2.0 Prise en charge RAID 0,1,10
LAN	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	10 / 100 Mb/s négociation automatique 10 / 100 / 1000 Mb/s négociation automatique
Codec audio	ALC662	Sortie audio à 5.1 voies Prise en charge de l'audio haute définition
Fentes	Fente PCI Express Gen2 x16 x1 Fente PCI Express x1 x1	
Connecteur embarqué	Connecteur SATA x4 Connecteur du panneau avant x1 Connecteur Audio du panneau avant x1 Embase de ventilateur UC x1 Embase de ventilateur système x1	Chaque connecteur prend en charge 1 périphérique SATA Prend en charge les équipements du panneau avant Prend en charge la fonction audio du panneau avant Alimentation électrique du ventilateur UC (avec fonction de ventilateur intelligent) Alimentation électrique du ventilateur système

SPEC			
	Embase d'effacement CMOS	x1	
	Connecteur USB2.0	x2	Chaque connecteur prend en charge 2 ports USB2.0 de panneau avant
	Port série	x1	
	Connecteur d'alimentation (24 broches)	x1	
	Connecteur d'alimentation (4broches)	x1	
E/S du panneau arrière	Clavier / Souris PS/2	x1	
	Port VGA	x1	
	Port LAN	x1	
	Port USB2.0	x4	
	Fiche audio	x3	
Dimensions de la carte	175 mm (l) X 226 mm (H)		
Support SE	Windows XP / Vista / 7		Biostar se réserve le droit d'ajouter ou de supprimer le support de SE avec ou sans préavis.

ITALIAN

SPECIFICA		
CPU	Socket FM1 Processori AMD A-Series / E2-Series / Athlon II / Sempron	L'architettura AMD 64 abilita la computazione 32 e 64 bit (Watt massimo: 100W)
Chipset	AMD A55	
Super I/O	ITE 8772E Fornisce le funzionalità legacy Super I/O usate più comunemente. Interfaccia LPC (Low Pin Count)	Funzioni di controllo dell'ambiente: Monitoraggio hardware Controller velocità ventolina Funzione "Smart Guardian" di ITE
Memoria principale	Alloggi DIMM DDR3 x 2 Capacità massima della memoria 16GB Ciascun DIMM supporta DDR3 512MB/1GB/2GB/4GB/8GB	Modulo di memoria DDR3 a canale doppio Supporto di DDR3 800/1066/1333/1600/1866 DIMM registrati e DIMM ECC non sono supportati
SATA II	Controller Serial ATA integrato	Velocità di trasferimento dei dati fino a 3 Gb/s. Compatibile specifiche SATA Versione 2.0 Supporto RAID 0,1,10
LAN	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	Negoziazione automatica 10 / 100 Mb/s Negoziazione automatica 10 / 100 / 1000 Mb/s
Codec audio	ALC662	Uscita audio 5.1 canali Supporto audio High-Definition (HD)
Alloggi	Alloggio PCI Express Gen2 x16 x1 Alloggio PCI Express x1 x1	
Connettori su scheda	Connettore SATA x4 Connettore pannello frontale x1 Connettore audio frontale x1 Collettore ventolina CPU x1 Collettore ventolina sistema x1 Collettore cancellazione CMOS x1	Ciascun connettore supporta 1 unità SATA Supporta i servizi del pannello frontale Supporta la funzione audio pannello frontale Alimentazione ventolina CPU (con funzione Smart Fan) Alimentazione ventolina di sistema

SPECIFICA			
	Connettore USB2.0	x2	Ciascun connettore supporta 2 porte USB2.0 pannello frontale
	Porta seriale	x1	
	Connettore alimentazione (24 pin)	x1	
	Connettore alimentazione (4pin)	x1	
I/O pannello posteriore	Tastiera / Mouse PS/2	x1	
	Porta VGA	x1	
	Porta LAN	x1	
	Porta USB2.0	x4	
	Connettore audio	x3	
Dimensioni scheda	175 mm (larghezza) x 226 mm (altezza)		
Sistemi operativi supportati	Windows XP / Vista / 7		Biostar si riserva il diritto di aggiungere o rimuovere il supporto di qualsiasi sistema operativo senza preavviso.

SPANISH

Especificación		
CPU	Conector FM1 Procesadores AMD A-Series / E2-Series / Athlon II / Sempron	La arquitectura AMD 64 permite el procesado de 32 y 64 bits (Vatio máximo: 100W)
Conjunto de chips	AMD A55	
Súper E/S	ITE 8772E Le ofrece las funcionalidades heredadas de uso más común Súper E/S. Interfaz de cuenta Low Pin	Iniciativas de control de entorno, Monitor hardware Controlador de velocidad de ventilador Función "Guardia inteligente" de ITE
Memoria principal	Ranuras DIMM DDR3 x 2 Capacidad máxima de memoria de 16GB Cada DIMM admite DDR de 512MB/1GB/2GB/4GB/8GB	Módulo de memoria DDR3 de canal Doble Admite DDR3 de 800/1066/1333/1600/1866 No admite DIMM registrados o DIMM compatibles con ECC
SATA II	Controlador ATA Serie Integrado	Tasas de transferencia de hasta 3 Gb/s. Compatible con la versión SATA 2.0 Admite RAID 0,1,10
Red Local	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	Negociación de 10 / 100 Mb/s Negociación de 10 / 100 / 1000 Mb/s
Códecs de sonido	ALC662	Salida de sonido de 5.1 canales Soporte de sonido de Alta Definición
Ranuras	Ranura PCI Express Gen2 x16 X1 Ranura PCI Express x1 X1	
Conectores en placa	Conector SATA X4 Conector de panel frontal X1 Conector de sonido frontal X1 Cabecera de ventilador de CPU X1 Cabecera de ventilador de sistema X1	Cada conector soporta 1 dispositivos SATA Soporta instalaciones en el panel frontal Soporta funciones de sonido en el panel frontal Fuente de alimentación de ventilador de CPU (con función Smart Fan) Fuente de alimentación de ventilador de sistema

Especificación			
	Cabecera de borrado de CMOS	X1	
	Conector USB2.0	X2	Cada conector soporta 2 puertos USB2.0 frontales
	Puerto serie	X1	
	Conector de alimentación (24 patillas)	X1	
	Conector de alimentación (4patillas)	X1	
Panel trasero de E/S	Teclado / Ratón PS/2	X1	
	Puerto VGA	X1	
	Puerto de red local	X1	
	Puerto USB2.0	X4	
	Conector de sonido	X3	
Tamaño de la placa	175 mm. (A) X 226 mm. (H)		
Soporte de sistema operativo	Windows XP / Vista / 7		Biostar se reserva el derecho de añadir o retirar el soporte de cualquier SO con o sin aviso previo.

PORTUGUESE

ESPECIFICAÇÕES		
CPU	Socket FM1 Processadores AMD A-Series / E2-Series / Athlon II / Sempron	A arquitectura AMD 64 permite uma computação de 32 e 64 bits (Watt máximo: 100W)
Chipset	AMD A55	
Especificação Super I/O	ITE 8772E Proporciona as funcionalidades mais utilizadas em termos da especificação Super I/O. Interface LPC (Low Pin Count).	Iniciativas para controlo do ambiente Monitorização do hardware Controlador da velocidade da ventoinha Função "Smart Guardian" da ITE
Memória principal	Ranhuras DIMM DDR3 x 2 Capacidade máxima de memória: 16GB Cada módulo DIMM suporta uma memória DDR3 de 512MB/ 1GB/2GB/4GB/8GB	Módulo de memória DDR3 de canal duplo Suporta módulos DDR3 800/1066/1333/1600/1866 Os módulos DIMM registados e os DIMM ECC não são suportados
SATA II	Controlador Serial ATA integrado	Velocidades de transmissão de dados até 3 Gb/s. Compatibilidade com a especificação SATA versão 2.0 Suporta as funções RAID 0,1,10
LAN	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	Auto negociação de 10 / 100 Mb/s Auto negociação de 10 / 100 / 1000 Mb/s
Codec de som	ALC662	Saída de áudio de 5.1 canais Suporta a especificação High-Definition Audio
Ranhuras	Ranhura PCI Express Gen2 x16 x1 Ranhura PCI Express x1 x1	
Conectores na placa	Conector SATA x4 Conector do painel frontal x1 Conector de áudio frontal x1 Conector da ventoinha da CPU x1	Cada conector suporta 1 dispositivo SATA Para suporte de várias funções no painel frontal Suporta a função de áudio no painel frontal Alimentação da ventoinha da CPU (com a função Smart Fan)

ESPECIFICAÇÕES			
	Conector da ventoinha do sistema	x1	Alimentação da ventoinha do sistema
	Conector para limpeza do CMOS	x1	
	Conector USB2.0	x2	Cada conector suporta 2 portas USB2.0 no painel frontal
	Porta série	x1	
	Conector de alimentação (24 pinos)	x1	
	Conector de alimentação (4 pinos)	x1	
Entradas/Saídas no painel traseiro	Teclado / Rato PS/2	x1	
	Porta VGA	x1	
	Porta LAN	x1	
	Porta USB2.0	x4	
	Tomada de áudio	x3	
Tamanho da placa	175 mm (L) X 226 mm (A)		
Sistemas operativos suportados	Windows XP / Vista / 7		A Biostar reserva-se o direito de adicionar ou remover suporte para qualquer sistema operativo com ou sem aviso prévio.

POLISH

SPEC		
Procesor	Socket FM1 AMD A-Series / E2-Series / Athlon II / Sempron Procesory	Architektura AMD 64 umożliwia przetwarzanie 32 i 64 bitowe (Maksymalny Watt: 100W)
Chipset	AMD A55	
Pamięć główna	Gniazda DDR3 DIMM x 2 Maks. wielkość pamięci 16GB Każde gniazdo DIMM obsługuje moduły 512MB/1GB/2GB/4GB/8GB DDR3	Moduł pamięci DDR3 z trybem podwójnego kanału Obsługa DDR3 800/1066/1333/1600/1866 Brak obsługi Registered DIMM oraz ECC DIMM
Super I/O	ITE 8772E Zapewnia najbardziej powszechne funkcje Super I/O. Interfejs Low Pin Count	Funkcje kontroli warunków pracy, Monitor H/W Kontroler prędkości wentylatora Funkcja ITE "Smart Guardian"
SATA II	Zintegrowany kontroler Serial ATA	Transfer danych do 3 Gb/s. Zgodność ze specyfikacją SATA w wersji 2.0 Obsługa RAID 0,1,10
LAN	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	10/100 Mb/s z automatyczną negocjacją szybkości 10/100/1000Mb/s z automatyczną negocjacją szybkości
Kodek dźwiękowy	ALC662	5.1 kanałowe wyjście audio Obsługa High-Definition Audio
Gniazda	Gniazdo PCI Express Gen2 x16 x1 Gniazdo PCI Express x1 x1	
Złącza wbudowane	Złącze SATA x4 Złącze panela przedniego x1 Przednie złącze audio x1 Złącze główkowe wentylatora procesora x1 Złącze główkowe wentylatora systemowego x1	Każde złącze obsługuje 1 urządzenie SATA Obsługa elementów panela przedniego Obsługa funkcji audio na panelu przednim Zasilanie wentylatora procesora (z funkcją Smart Fan) Zasilanie wentylatora systemowego

SPEC			
	Złącze główkowe kasowania CMOS	x1	
	Złącze USB2.0	x2	Każde złącze obsługuje 2 porty USB2.0 na panelu przednim
	Port szeregowy	x1	
	Złącze zasilania (24 pinowe)	x1	
	Złącze zasilania (4 pinowe)	x1	
Back Panel I/O	Klawiatura / Mysz PS/2	x1	
	Port VGA	x1	
	Port LAN	x1	
	Port USB2.0	x4	
	Gniazdo audio	x3	
Wymiary płyty	175 mm (S) X 226 mm (W)		
Obsługa systemu operacyjnego	Windows XP / Vista / 7		Biostar zastrzega sobie prawo dodawania lub odwoływania obsługi dowolnego systemu operacyjnego bez powiadomienia.

RUSSIAN

СПЕЦ		
CPU (центральный процессор)	Гнездо FM1 Процессоры AMD A-Series / E2-Series / Athlon II / Sempron	Архитектура AMD 64 разрешать обработка данных на 32 и 64 бит (Максимальный ватт: 100W)
Набор микросхем	AMD A55	
Основная память	Слоты DDR3 DIMM x 2 Максимальная ёмкость памяти 16ГБ Каждый модуль DIMM поддерживает 512МБ/1ГБ/2ГБ/4ГБ/8ГБ DDR3	Модуль памяти с двухканальным режимом DDR3 Поддержка DDR3 800/1066/1333/1600/1866 Не поддерживает зарегистрированные модули DIMM and ECC DIMM
Super I/O	ITE 8772E Обеспечивает наиболее используемые действующие функциональные возможности Super I/O. Интерфейс с низким количеством выводов	Инициативы по охране окружающей среды, Аппаратный монитор Регулятор скорости Функция ITE "Smart Guardian" (Интеллектуальная защита)
SATA II	Встроенное последовательное устройство управления ATA	скорость передачи данных до 3 гигабит/с. Соответствие спецификации SATA версия 2.0 Поддержка RAID 0,1,10
Локальная сеть	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	Автоматическое согласование 10/ 100 Мб/с Автоматическое согласование 10/ 100 1000 Мб/с
Звуковой кодек	ALC662	Звуковая поддержка High-Definition 5.1канальный звуковой выход
Слоты	Слот PCI Express Gen2 x16 x1 Слот PCI Express x1 x1	
Встроенный разъём	Разъём SATA x4 Разъём на лицевой панели x1	Каждый разъём поддерживает 1 устройство SATA Поддержка устройств на лицевой панели

СПЕЦ		
	Входной звуковой разъём x1	Поддержка звуковых функций на лицевой панели
	Контактирующее приспособление вентилятора центрального процессора x1	Источник питания для вентилятора центрального процессора (с функцией интеллектуального вентилятора)
	Контактирующее приспособление вентилятора системы x1	Источник питания для вентилятора системы
	Открытое контактирующее приспособление CMOS x1	
	USB2.0-разъём x2	Каждый разъём поддерживает 2 USB2.0-порта на лицевой панели
	Последовательный порт x1	
	Разъем питания (24 вывод) x1	
	Разъем питания (4 вывод) x1	
Задняя панель средств ввода-вывода	Клавиатура / Мышь PS/2 x1 Порт VGA x1 Порт LAN x1 USB2.0-порт x4 Гнездо для подключения наушников x3	
Размер панели	175 мм (Ш) X 226 мм (В)	
Поддержка OS	Windows XP / Vista / 7	Biostar сохраняет за собой право добавлять или удалять средства обеспечения для OS с или без предварительного уведомления.

Arabic

المواصفات		
وحدة المعالجة المركزية	مقبس FM1 معالجات AMD A-Series / E2-Series / Athlon II / Sempron	إجراء العمليات الحلسوبية بسرعة 32 و 64 بت تمكن تقنية AMD 64 (قصـوى واط: 100و)
مجموعة الشرائح	AMD A55	
الذاكرة الرئيسية	فتحة DDR3 DIMM عدد 2 سعة ذاكرة قصوى 16 جيجا بليت تدعم كل فتحة DIMM تدعم ذاكرة من نوع DDR3 سعة 512/ ميجا بليت و1/ و2/ و4/ و8 جيجا بليت	وحدة ذاكرة DDR3 مزدوجة القناة تدعم الذاكرة من نوع DDR3 سعات 1866/1600/1333/1066/800 ميجا بليت لا تدعم رقائق الذاكرة DIMM وتلك التي لا تتوافق مع ECC
Super I/O	ITE 8772E توفر وظيفة Super I/O الأكثر استخداماً. تدعم تقنية Low Pin Count Interface	وسئل التحكم في البيئة: مراقب لمعرفة حالة الأجهزة مراقب في سرعة المروحة وظيفة "Smart Guardian" من ITE
SATA II	متحكم Serial ATA متكامل	نقل البيانات بسرعات تصل إلى 6 جيجابت/ثانية مطابقة لمواصفات SATA الإصدار 2.0 تدعم تقنية RAID 0,1,10
شبكة دلخلية	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	تفاوض تلقائي 100/10 ميجا بايت / ثانية تفاوض تلقائي 1000/100/10 ميجا بايت / ثانية
كوديك الصوت	ALC662	تدعم تقنية الصوت عالي التعريف من 5.1 قوات لخرج الصوت
القتحات	فتحة PCI Express Gen2 x16 عدد 1 فتحة PCI Expres x1 عدد 1	
المنافذ على سطح اللوحة	منفذ SATA عدد 4 منفذ اللوحة الأمامية عدد 1 منفذ الصوت الأمامي عدد 1 وصلة مروحة وحدة المعالجة المركزية عدد 1 وصلة مروحة النظام عدد 1 وصلة مسح CMOS عدد 1 منفذ USB2.0 عدد 2	يدعم كل منفذ واحد من أجهزة SATA يدعم تجهيزات اللوحة الأمامية يدعم وظيفة الصوت باللوحة الأمامية لتوصيل الطاقة لمروحة وحدة المعالجة مع وظيفة Smart Fan لتوصيل الطاقة لمروحة النظام يدعم كل منفذ فتحتي USB2.0 باللوحة الأمامية

المواصفات			
	منفذ تسلسلي	1عدد	
	منفذ توصيل الطاقة (24دبوس)	1 عدد	
	منفذ توصيل الطاقة (4دبابيس)	1 عدد	
منافذ دخل/خرج اللوحة الخلفية	لوحة مفاتيح / ماوس PS/2	1 عدد	
	منافذ VGA	1 عدد	
	منفذ شبكة اتصال محلية	1 عدد	
	منافذ USB2.0	4 عدد	
	مقبس صوت	3 عدد	
حجم اللوحة	226 مم (عرض) X 175 مم (ارتفاع)		
دعم أنظمة التشغيل	Windows XP / Vista / 7		تحتفظ Biostar بحقها في إضافة أو إزالة الدعم لأي نظام تشغيل بإخطار أو بدون إخطار.

JAPANESE

仕様		
CPU	Socket FM1 AMD A-Series / E2-Series / Athlon II / Sempron プロセッサ	AMD 64アーキテクチャでは、32ビットと64ビット計算が可能です (最高のワット: 100W)
チップセット	AMD A55	
メインメモリ	DDR3 DIMMスロット x 2 最大メモリ容量16GB 各DIMMは 512MB/1GB/2GB/4GB/8GB DDR3をサポート	デュアル チャンネルモードDDR3 メモリモジュール DDR3 800/1066/1333/1600/1866 をサポート 登録済みDIMMとECC DIMMはサポートされません
Super I/O	ITE 8772E もっとも一般に使用されるレガシーSuper I/O機能を採用しています。 低ピンカウントインターフェイス	環境コントロールイニシアチブ、 H/W モニター ファン速度コントローラ/ モニター ITEの「スマートガーディアン」機能
SATA II	統合シリアルATA コントローラ	最高3 Gb/秒のデータ転送速度 SATAバージョン2.0仕様に準拠。 RAID 0,1,10 のサポート
LAN	RTL8105E (A55MLC2, A55MLV2) RTL8111F (A55MGC)	10 / 100 Mb/秒のオートネゴシエーション 10 / 100 / 1000 Mb/秒のオートネゴシエーション
サウンド Codec	ALC662	ハイデフィニションオーディオのサポート 5.1 チャンネルオーディオアウト
スロット	PCI Express Gen2 x16スロット x1 PCI Express x1 スロット x1	
オンボードコネクタ	SATAコネクタ x4 フロントパネルコネクタ x1 フロントオーディオコネクタ x1 CPUファンヘッダ x1 システムファンヘッダ x1 CMOS クリアヘッダ x1	各コネクタは1つのSATAデバイスをサポートします フロントパネル機能をサポートします フロントパネルオーディオ機能をサポートします CPUファン電源装置(スマートファン機能を搭載) システムファン電源装置

仕様			
	USB2.0コネクタ	x2	各コネクタは2つのフロントパネルUSB2.0ポートをサポートします
	シリアルポート	x1	
	電源コネクタ(24ピン)	x1	
	電源コネクタ(4ピン)	x1	
背面パネル I/O	PS/2キーボード / マウス	x1	
	VGAポート	x1	
	LANポート	x1	
	USB2.0ポート	x4	
	オーディオジャック	x3	
ボードサイズ	175 mm (幅) X 226 mm (高さ)		
OSサポート	Windows XP / Vista / 7		Biostarは事前のサポートなしにOSサポートを追加または削除する権利を留保します。

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